



# *Introduction to Game Development in Unity*

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# *Agenda*

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What is Unity?

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## About The Assembly

- A smart lab & makerspace based out of in5 since 2014
- Over 350 free workshops done
- Focus on Smart Technology & Practical Applications
- Assembly : HACK - Embedded systems, IoT, hardware
- Assembly : CODE - Software - APIs, frameworks, apps
- Assembly: Data Science - Advanced topics in AI/ML
- Audience – Students | Professionals | Entrepreneurs
- Social Media: @makesmartthings
- [www.theassembly.ae](http://www.theassembly.ae) → Online workshop videos

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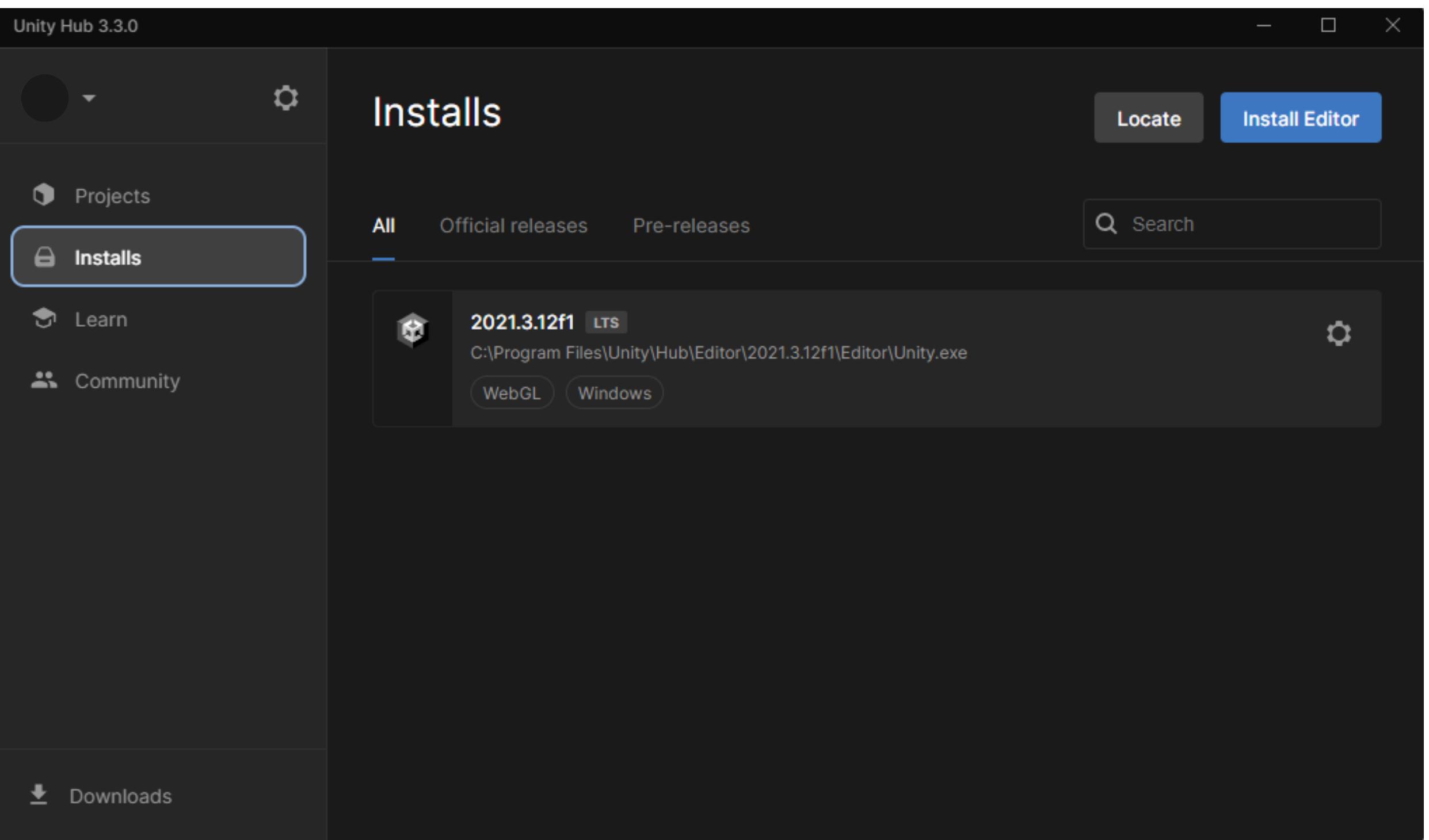
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## Quick Note

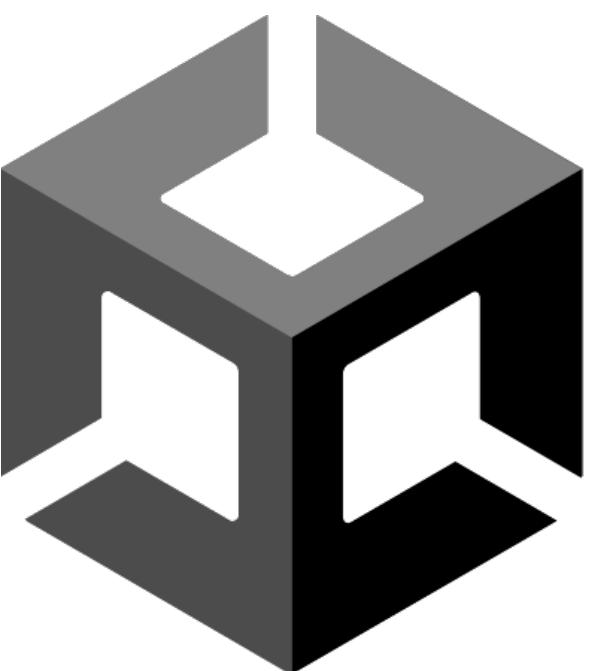


01 Install Unity Hub at: <https://unity3d.com/get-unity/download>



## What is Unity?

- 01 Unity is a Game engine
- 02 Uses C# for scripting and other aspects
- 03 Similar softwares: Unreal, Godot and GMS



**Unity**



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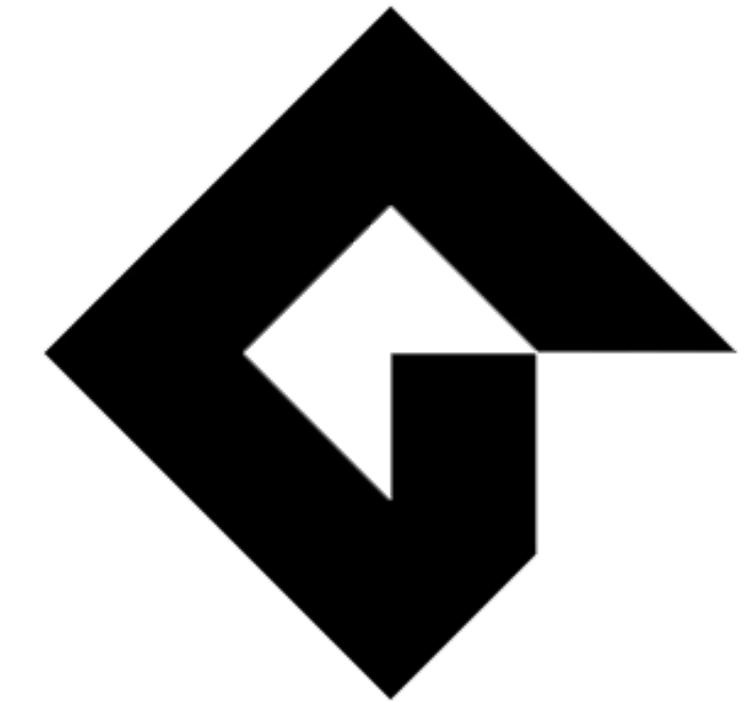
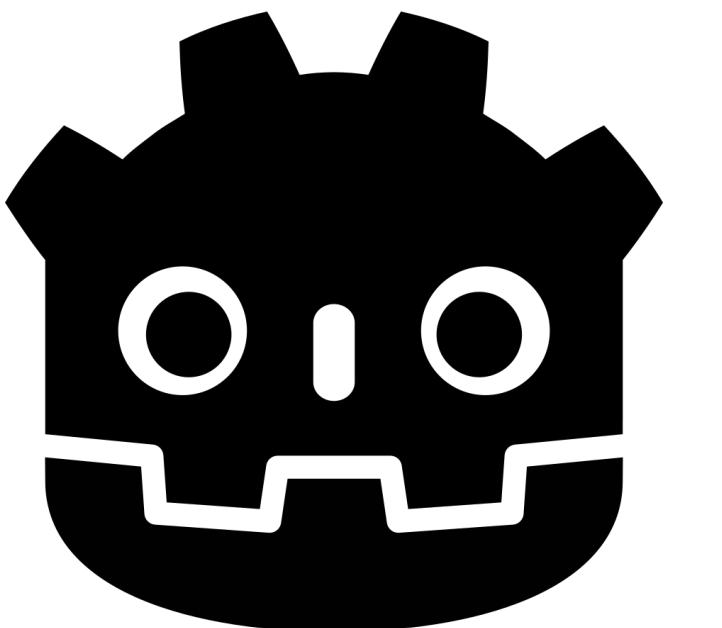
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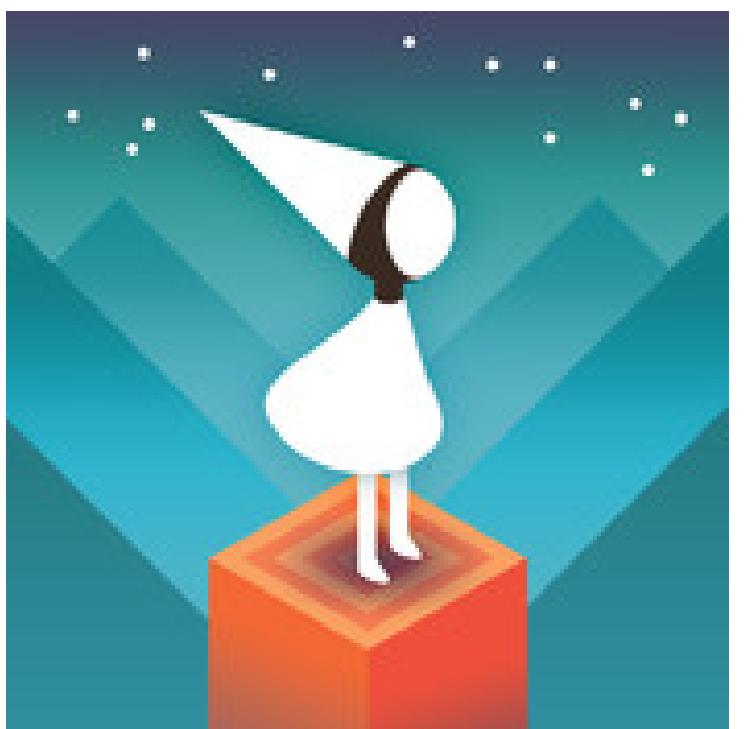


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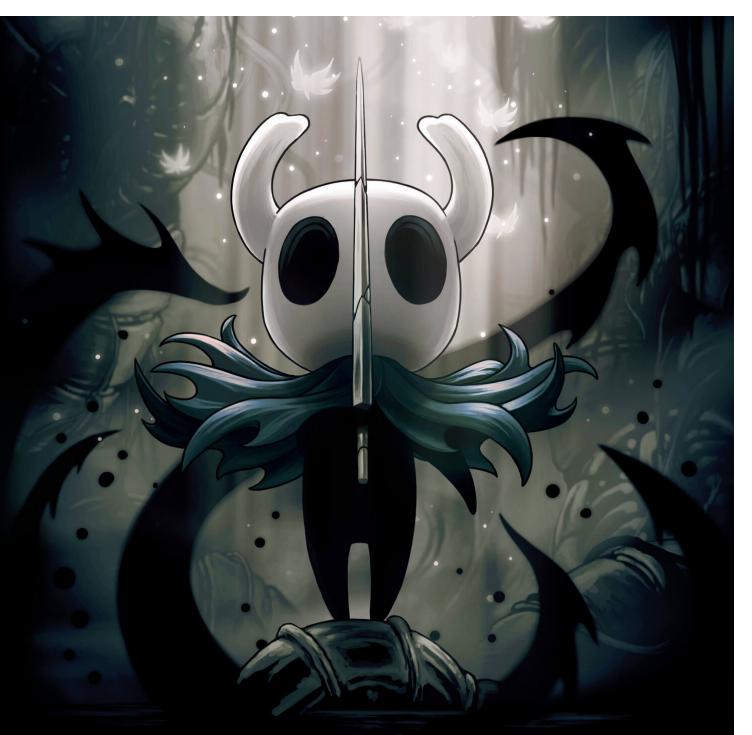
## Similar softwares



## Games Built with Unity



Monument Valley



Hollow Knight



Remnant: From the Ashes

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## Unity Hub Overview

01 Downloading Stable Unity Editor

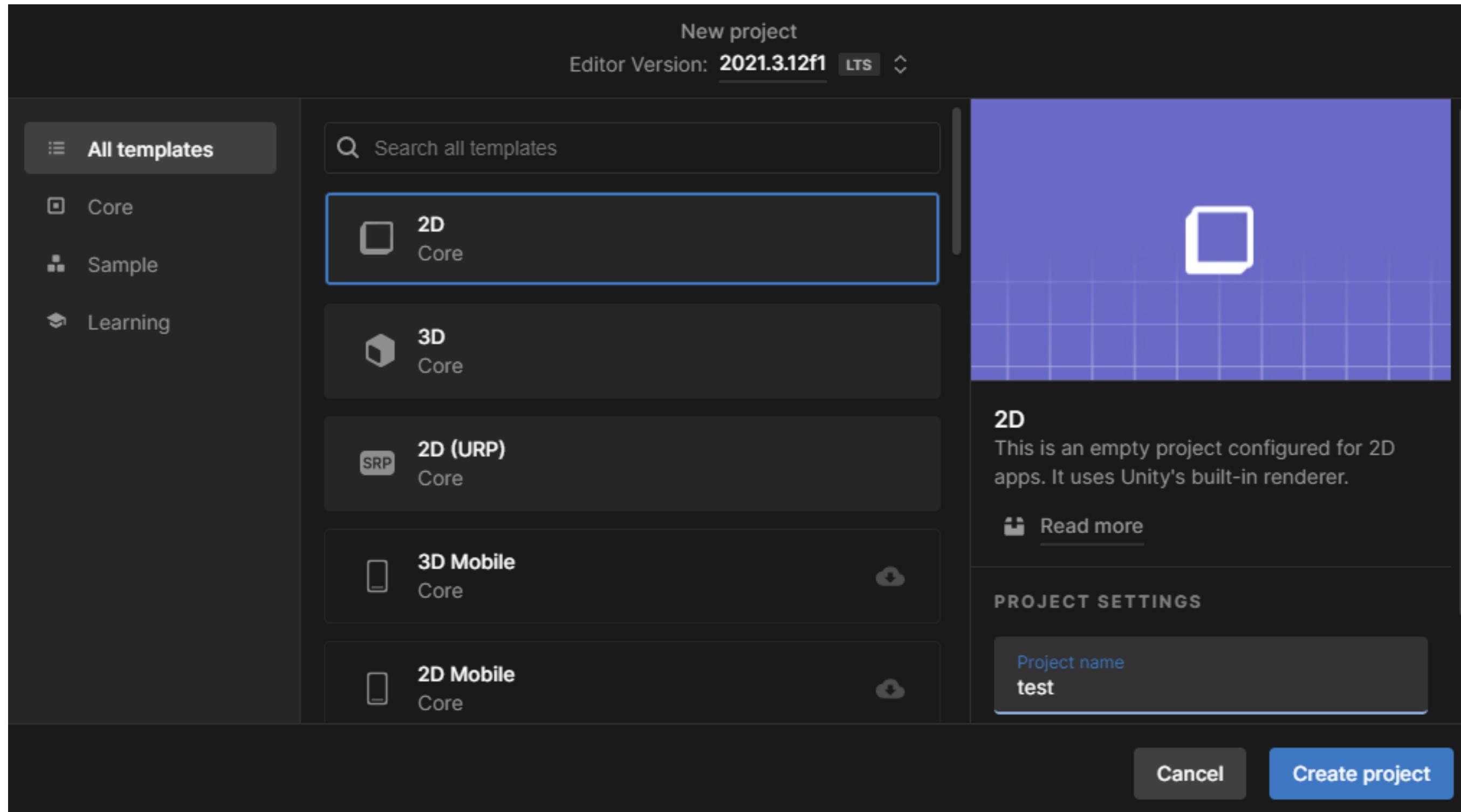
02 Installing modules

03 Creating projects

03 Default project location



# Unity Hub Overview



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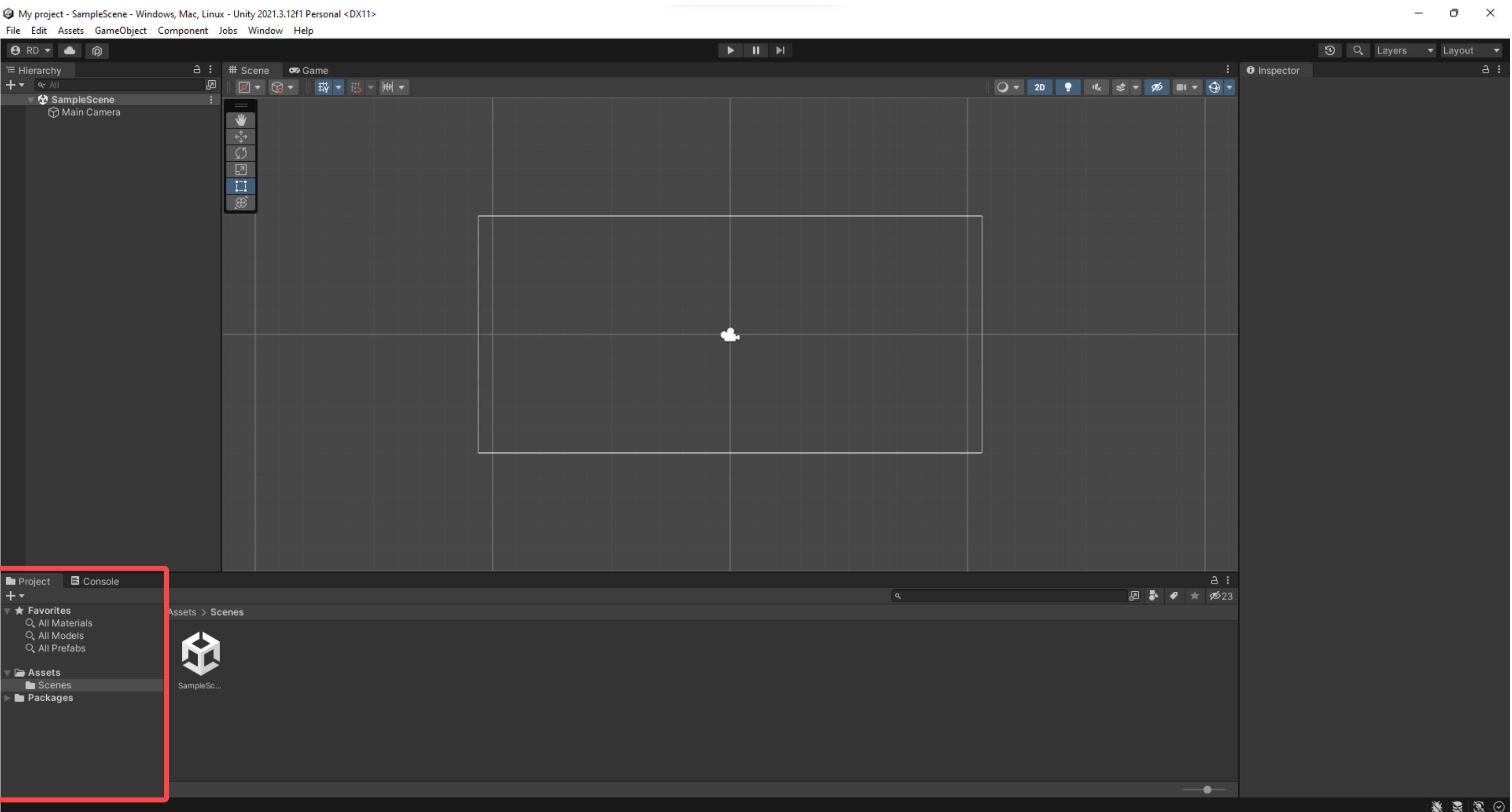
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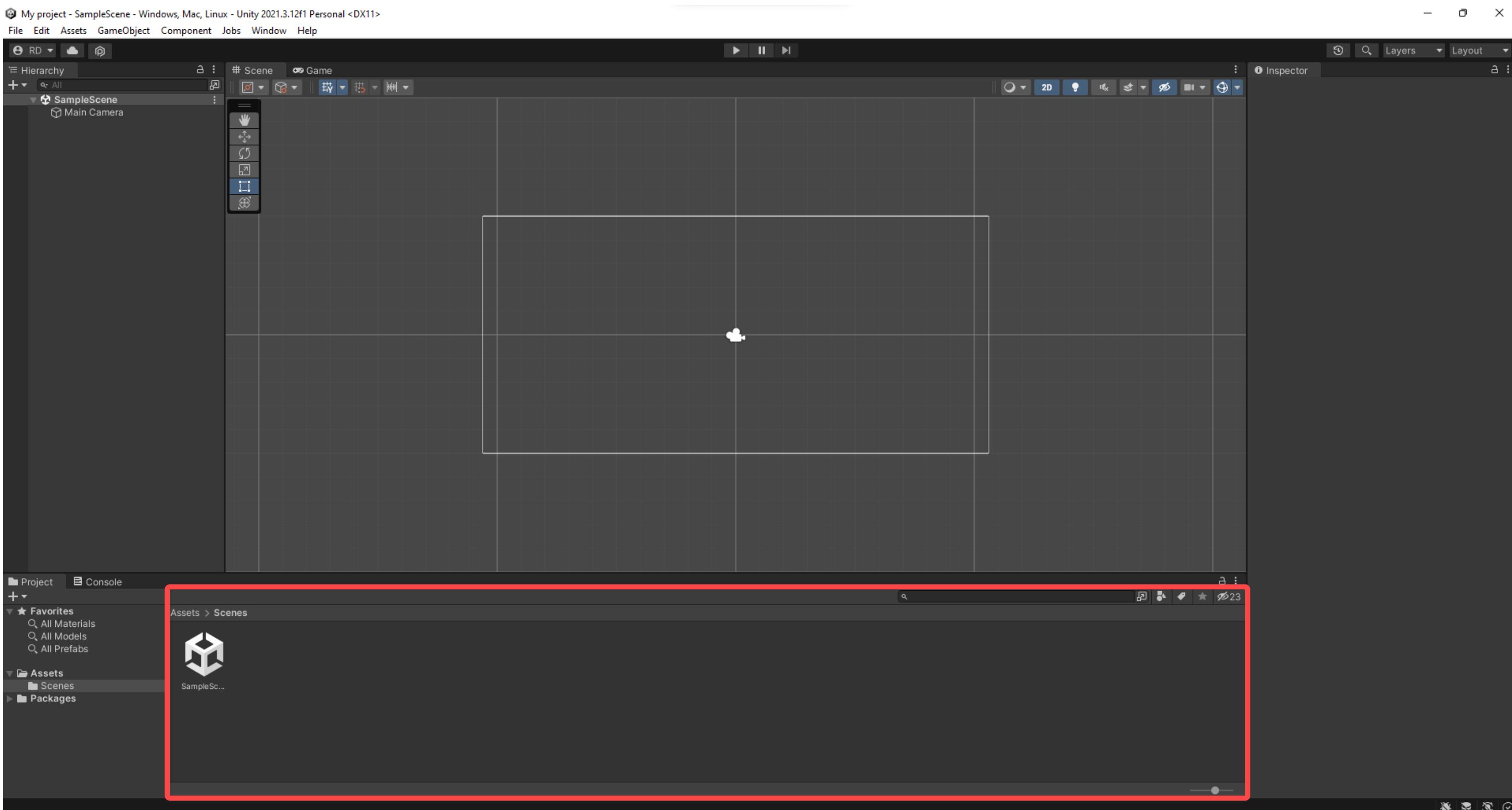
## File Tree



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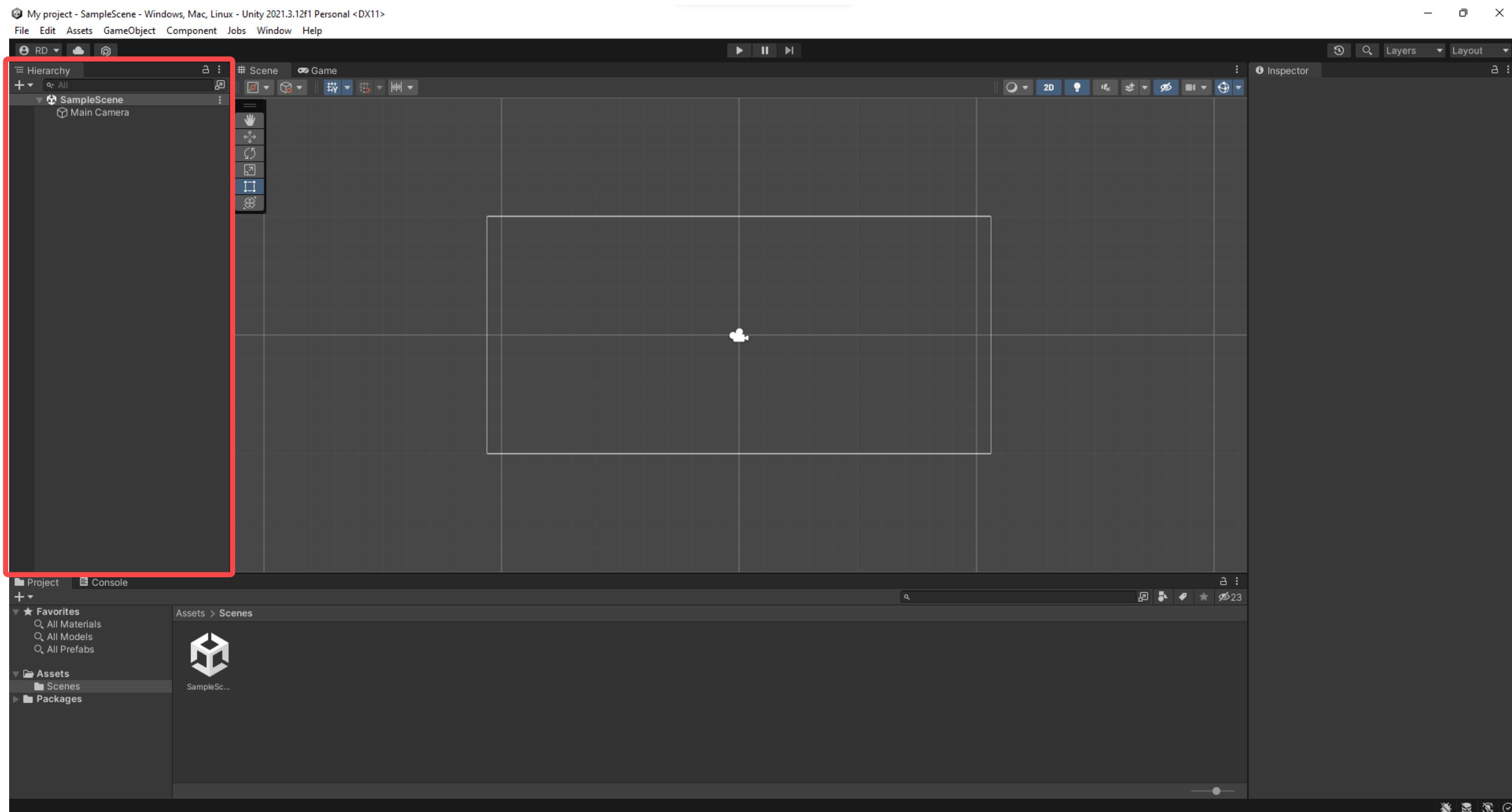
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## Expanded view



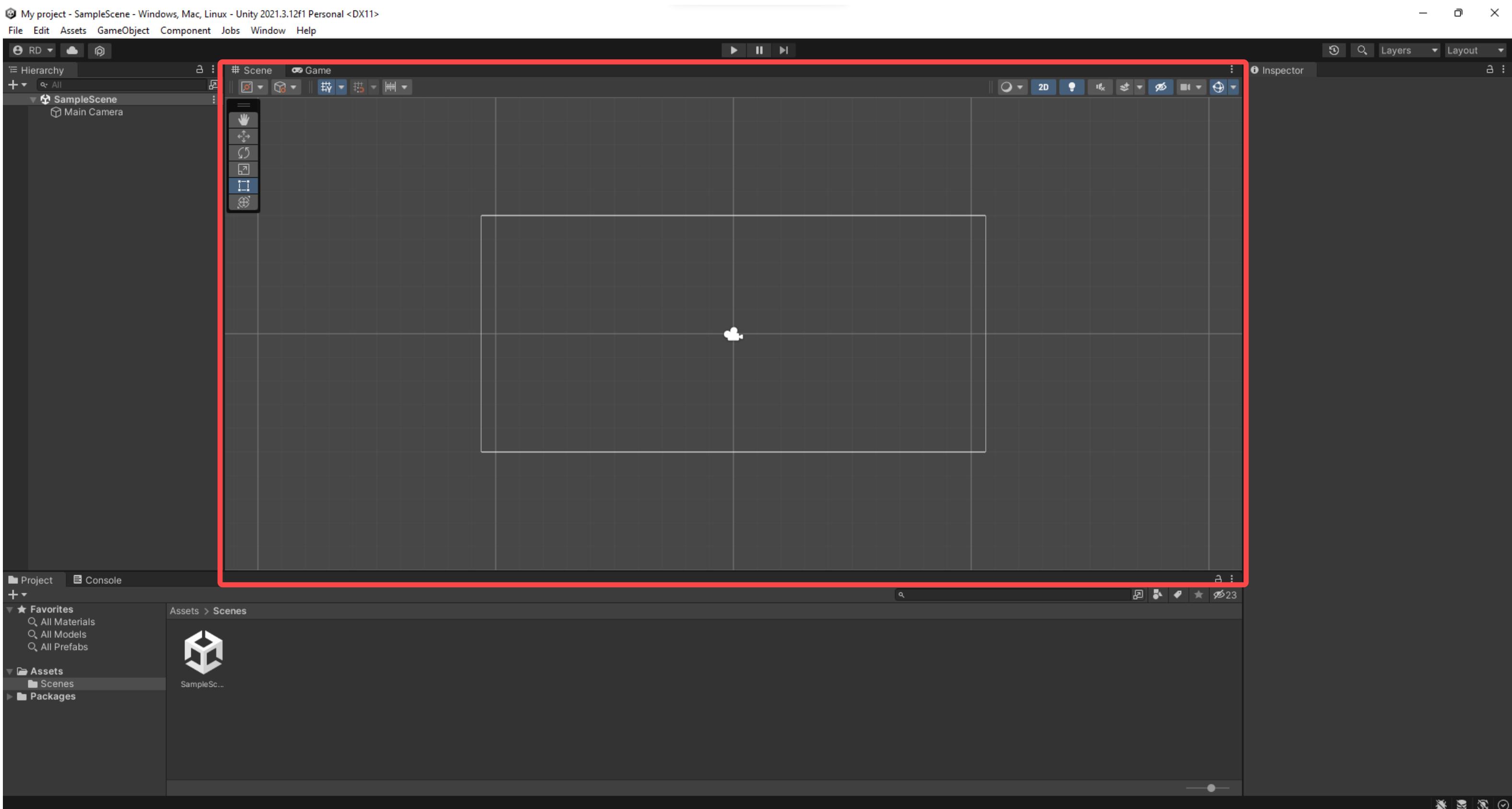
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# Object Hierarchy



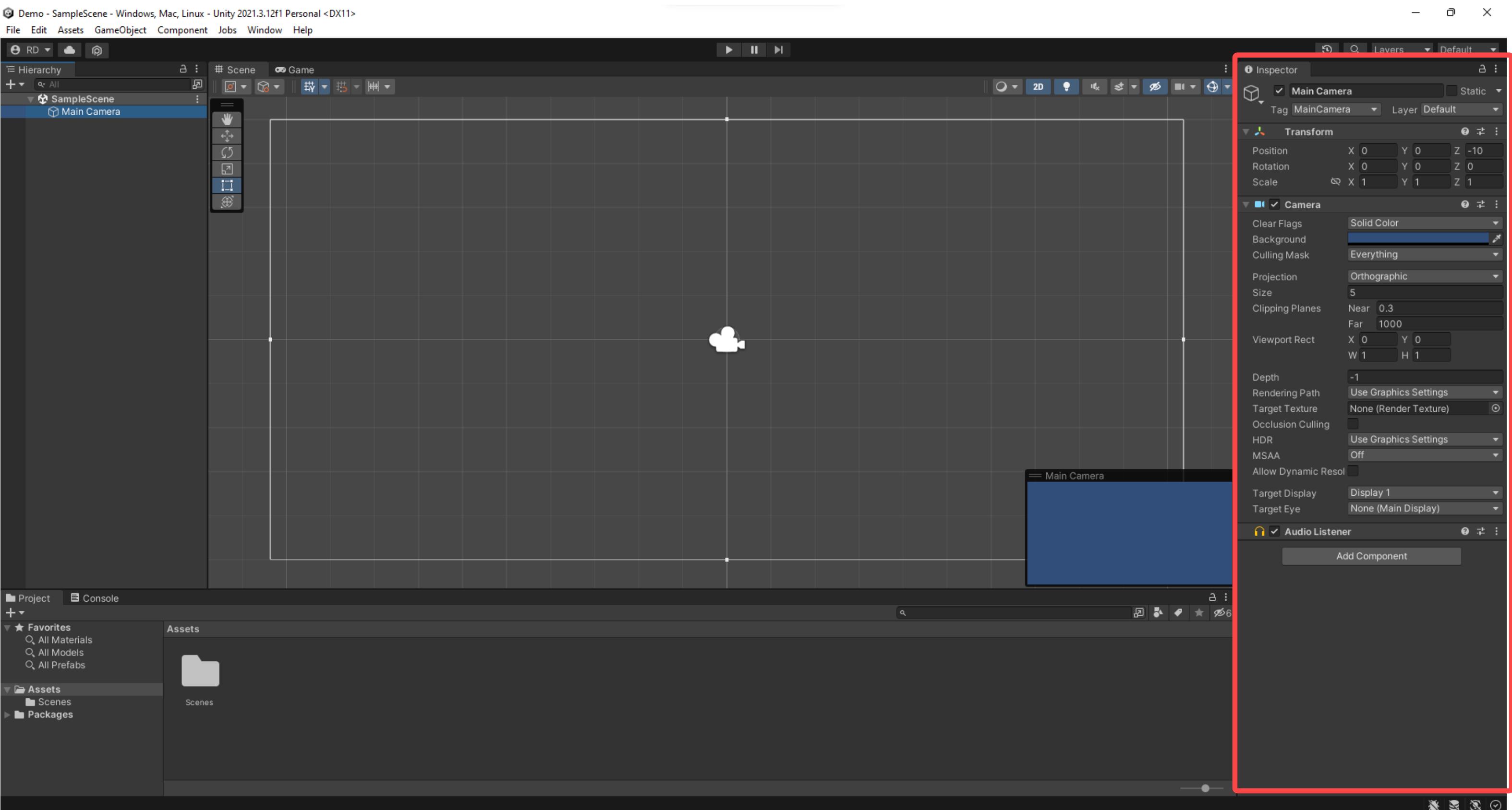
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# Viewport



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# Object Inspector



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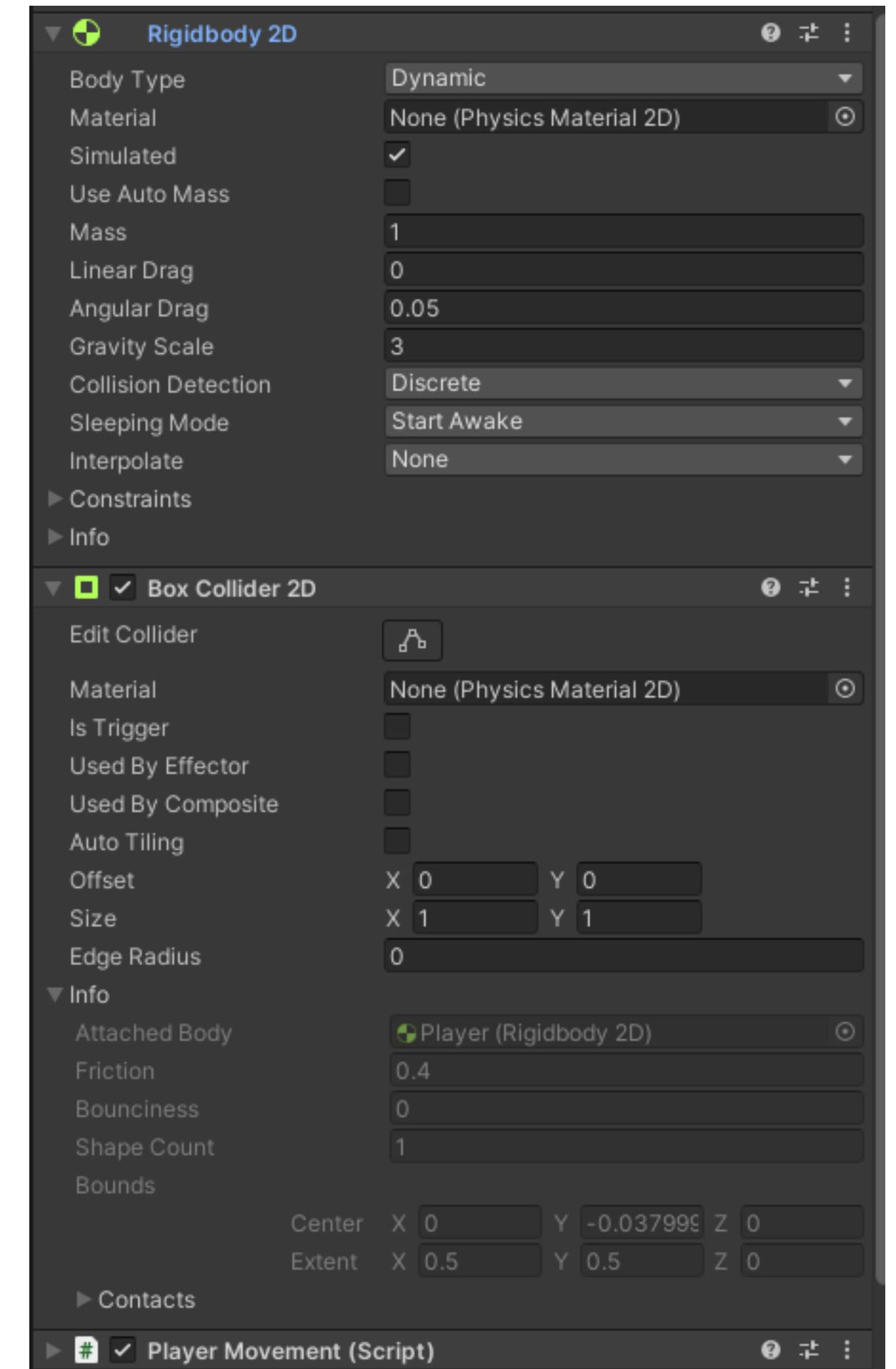
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# Setting up objects

## 01 Adding RigidBody2D

## 02 Adding Colliders

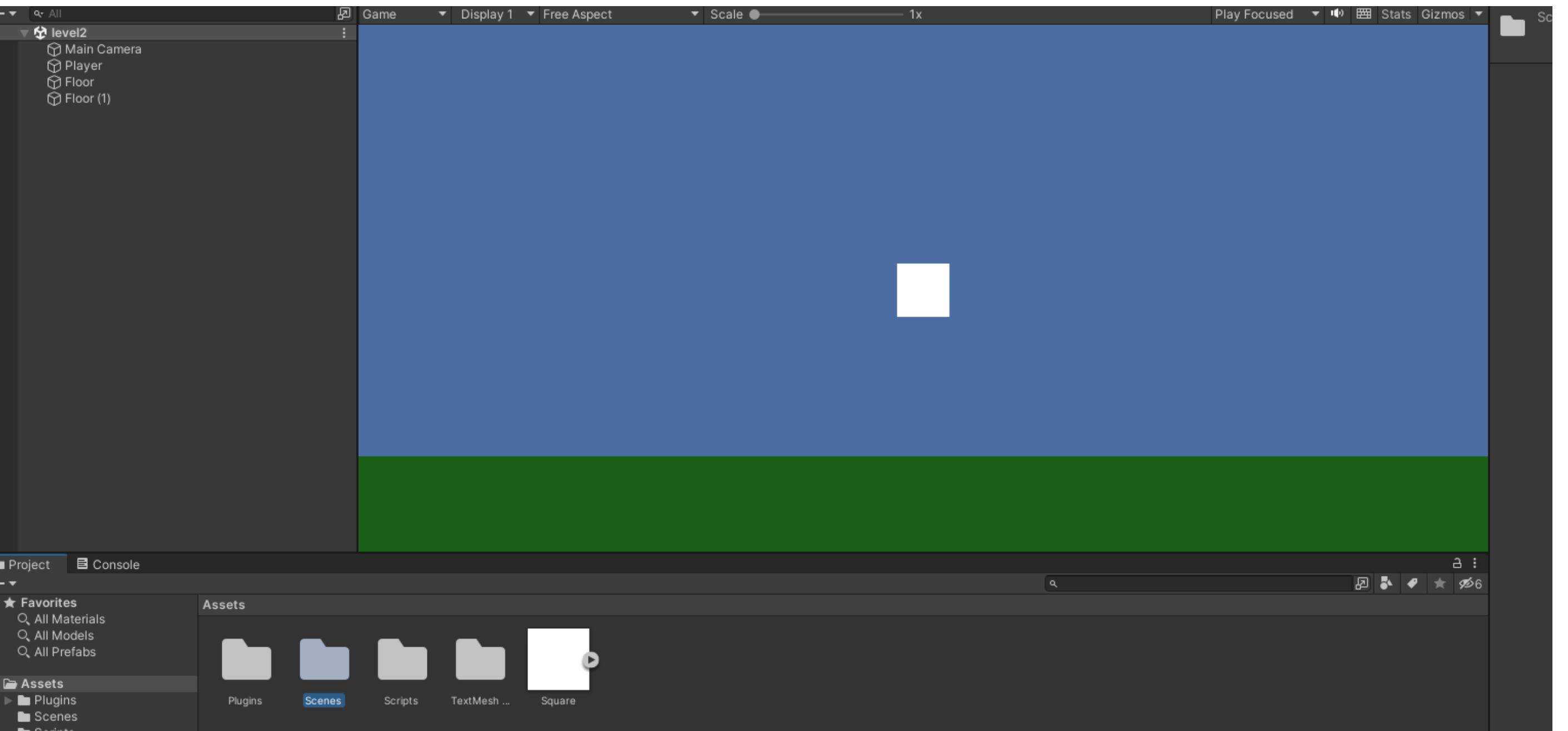
## 03 Making a C# script for PlayerMovement



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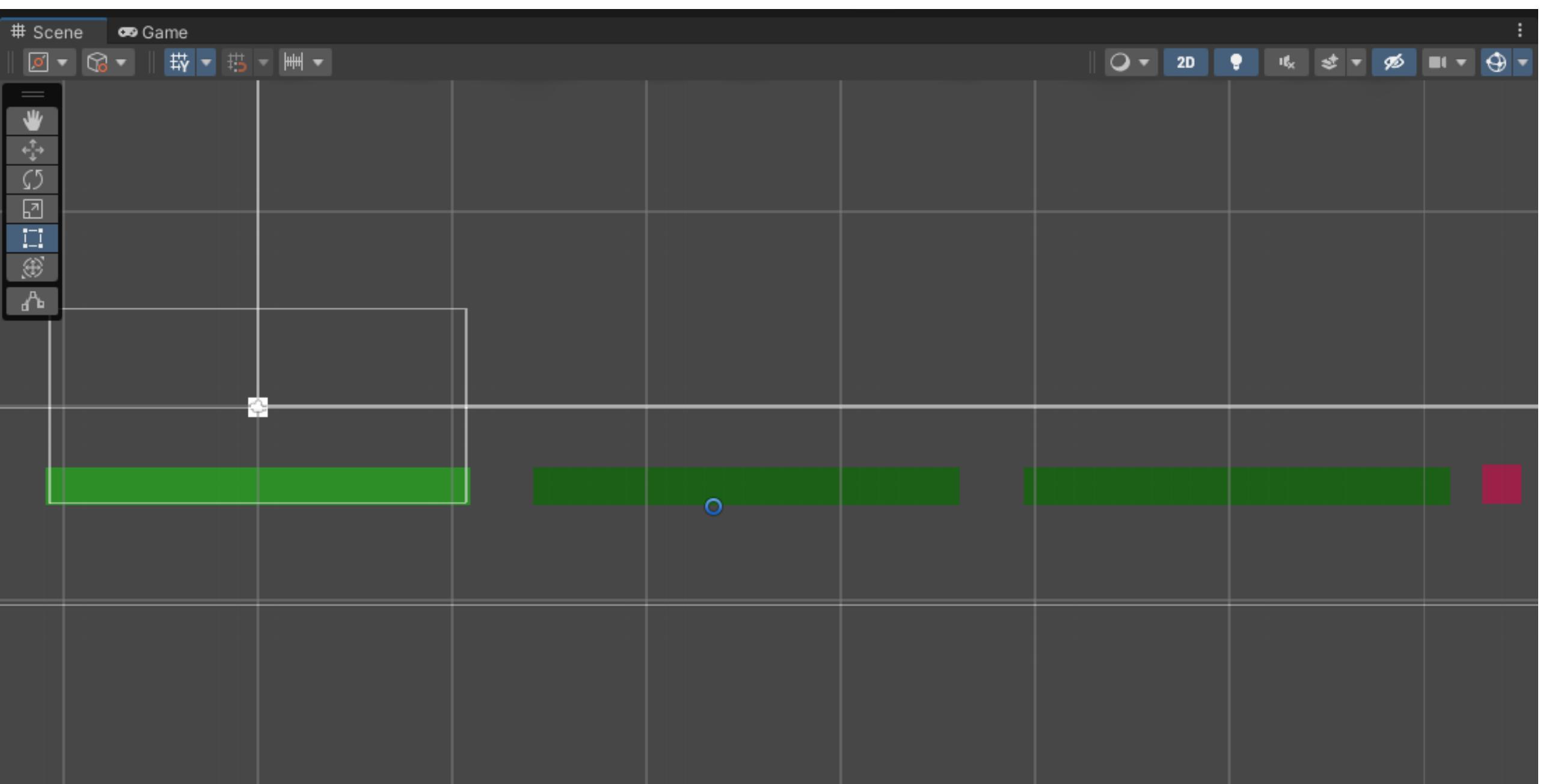
# Scripting

- 01 Writing script for movement
- 02 Changing force values
- 03 Adding jumping
- 04 Adding Ground Check



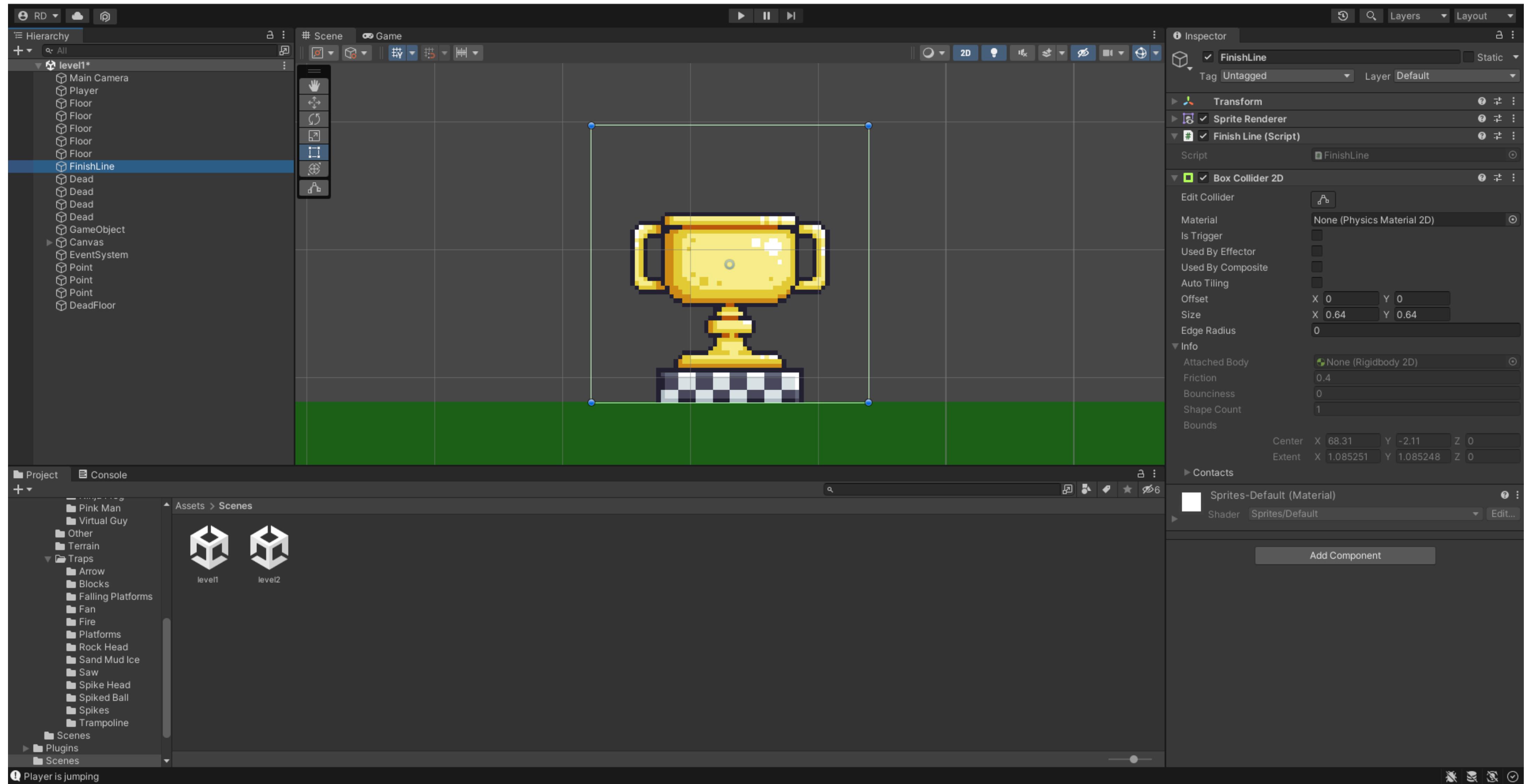
## Scripting Contd.

- 01 Test out player movement script
- 02 Add floor tiles to create level
- 03 Write camera movement script



## Making Multiple Levels

- 01 Renaming sample scene to level 1
- 02 Making the end level object
- 03 Write FinishLine script and add it to the object

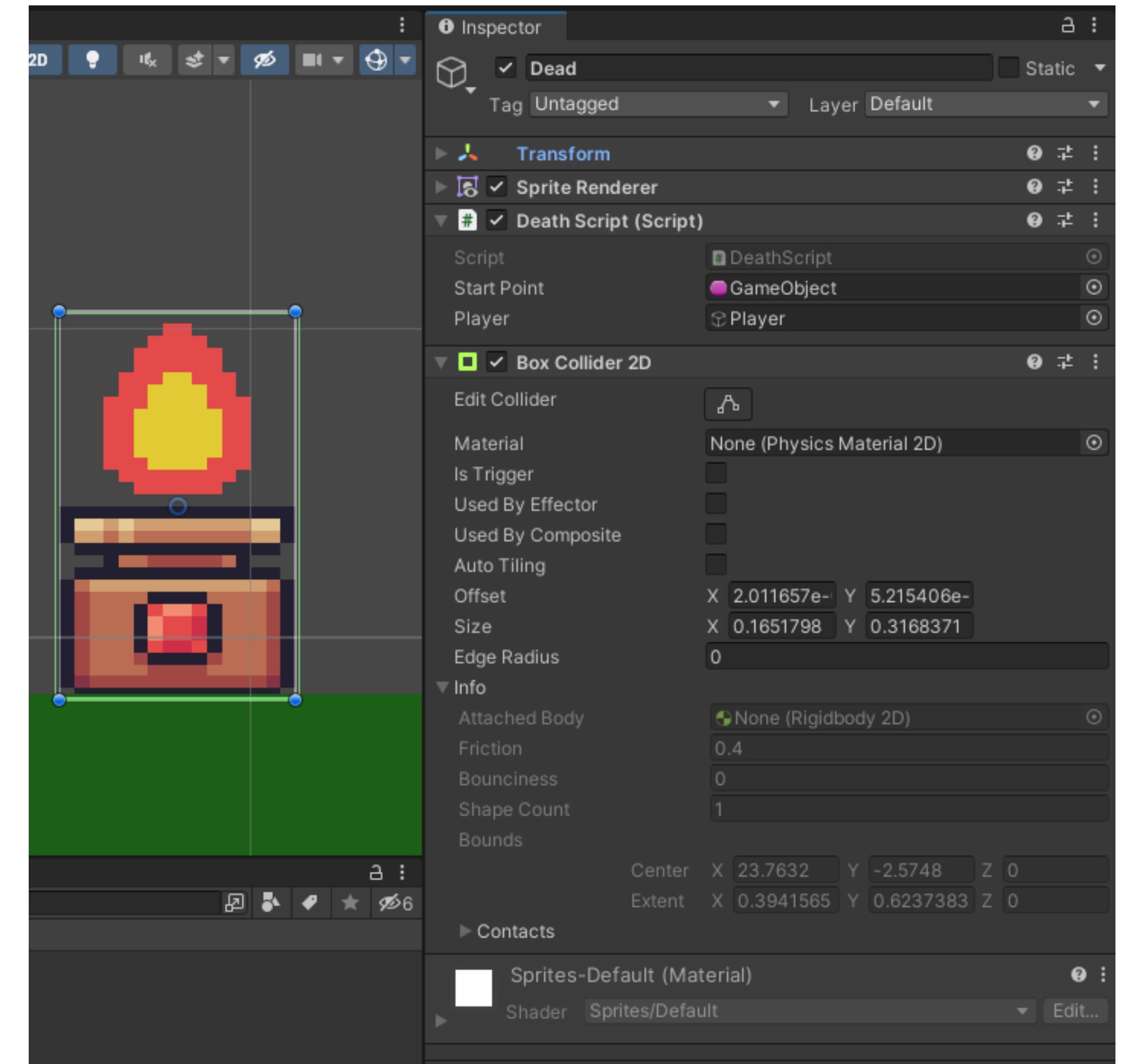


## Making Player Death Object

01 Make death object

02 Make empty object to mark respawn

03 Write DeathScript script for respawn



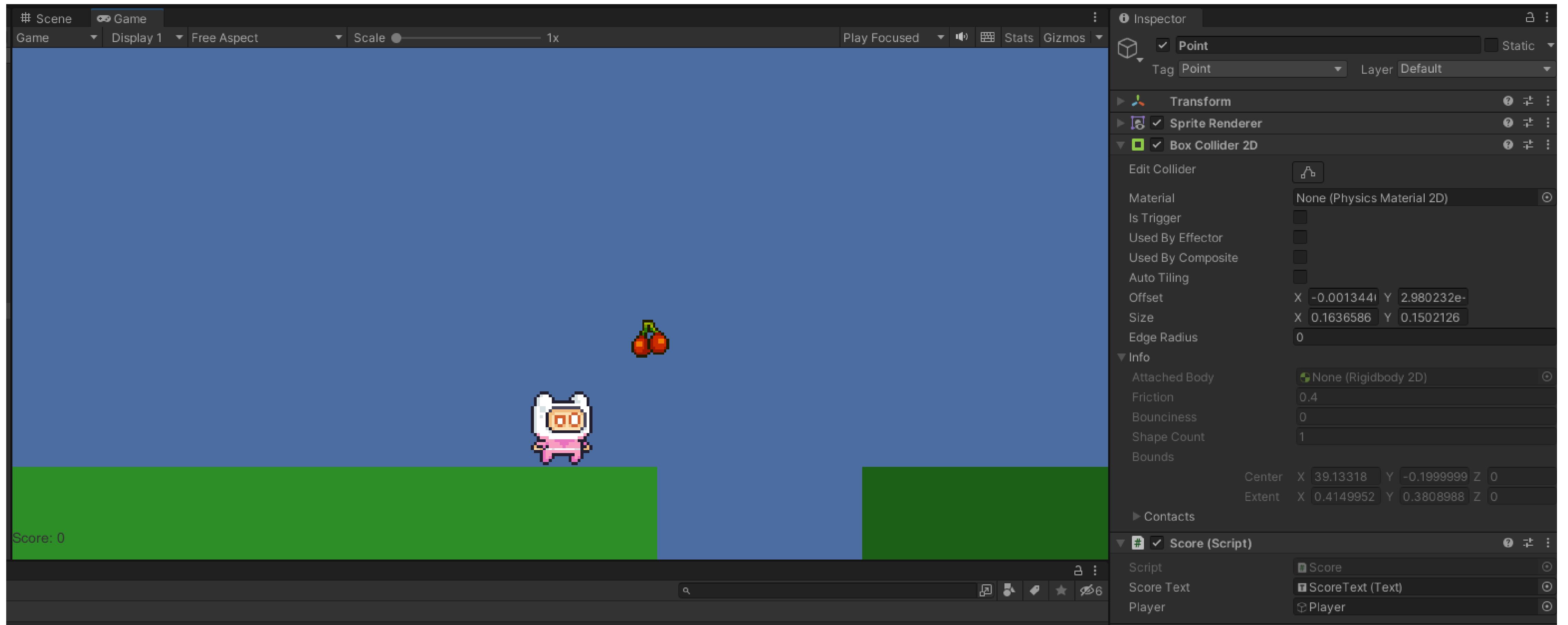
## Adding a Scoring System

01 Make Score Object

02 Inside Cava add ScoreText object

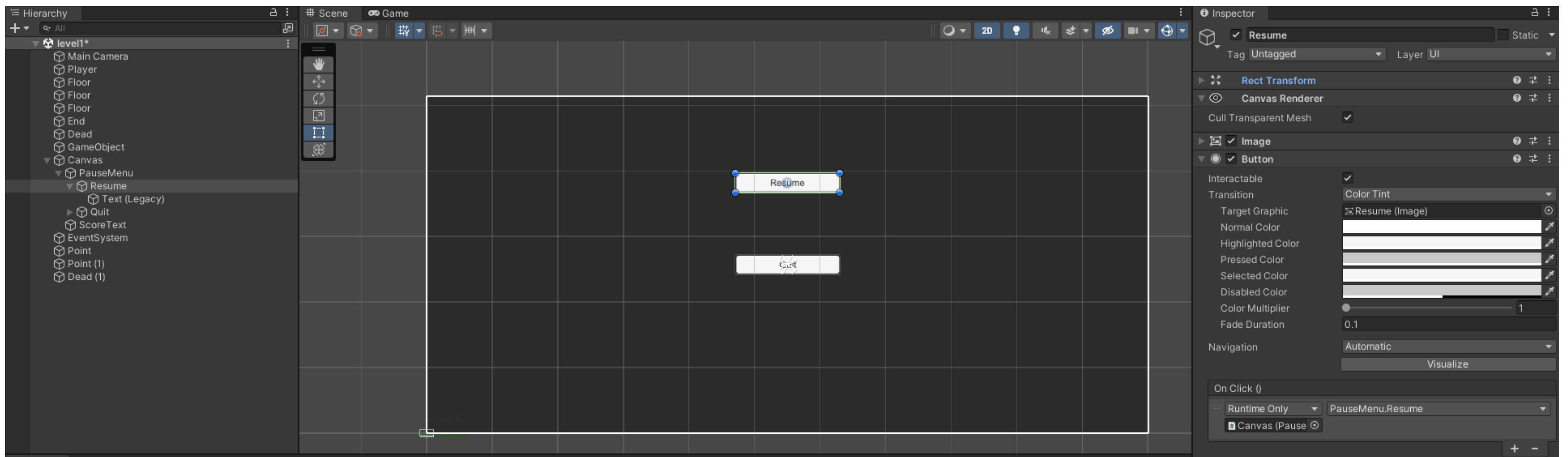
03 Write Score script

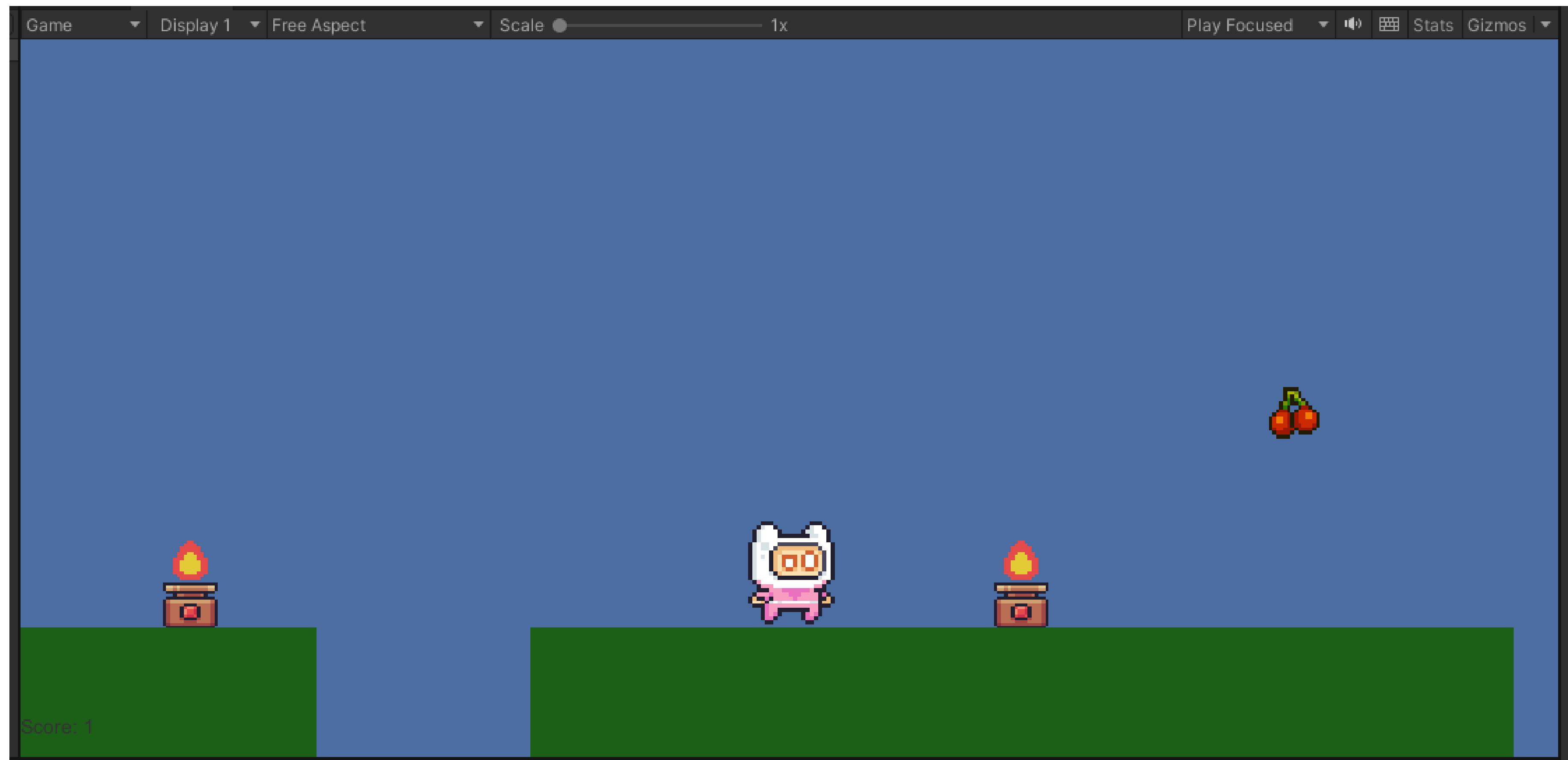
04 Add script to objects



## Making Start screen UI

- 01 Add Canvas object
- 02 Make Panel with 'Resume' and 'Quit' buttons
- 03 Write PauseMenu script to add button functionality
- 04 Attach objects and scripts





# Conclusion

# *Thank You*

Any Questions?

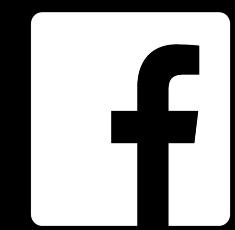


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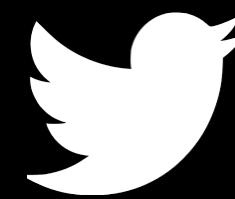
# *Social Media*



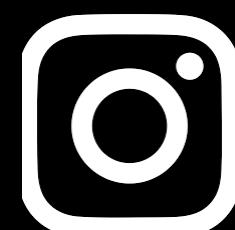
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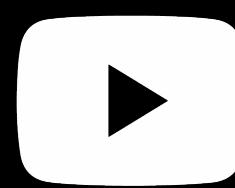
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